

‘De-inflectionalization’ of Japanese Adjectives and Watkins’ Law in Indo-European: A Comparison*

Frederick Bowman

The Ohio State University

Abstract

So-called ‘de-inflectionalization’ of adjectives is a familiar phenomenon in modern Japanese dialects spoken e.g. in Kyūshū and Tōhoku. Recent work has however pointed out that the term ‘de-inflectionalization’ is problematic, and has proposed that instead a fusion of adjectival root plus an inflectional morpheme has been reanalyzed as a new root, which becomes generalized through the paradigm. This paper takes this analysis of the changes seen in these adjectives as a starting point and endeavors to resolve difficulties in the data by recourse to a comparison with a complex of changes commonly seen in Indo-European languages and collectively known as ‘Watkins’ Law.’

Key words

Analogy; morphology; diachronic; Watkins’ Law; paradigms.

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1. Introduction

This paper investigates the adjectival inflections of four modern Japanese dialects (modern standard Japanese, Ōita and Miyazaki prefectures in Kyūshū, and Greater Tōhoku) and considers their diachronic background in comparison with a sporadically-occurring change familiar from Indo-European languages. This is the so-called ‘Watkins’ Law,’ in which the third person singular becomes the focal point for the analogical refashioning of verb paradigms. The paper proceeds in three parts. In Section 2, I introduce the Japanese data and summarize previous accounts of them. In Section 3, I discuss Watkins’ Law and its motivations. Section 4 applies the concepts introduced in Section 3 to the Japanese data from Section 2, proposing that the Japanese and Indo-European developments, though involving highly different morphological material, are nonetheless isomorphic in both their motivations and in their realization across time. Then, Section 5 summarizes the paper and introduces questions for further work.

2. The Japanese data and its interpretations; o-type dialects and e-type dialects

The adjectival paradigms of four modern Japanese dialects are given in summary in Figure 1 below; Figure 2 presents the Late Middle Japanese (henceforth LMJ) forms of which the modern forms are all reflexes.

	Standard (Tokyo)	Ōita	Miyazaki	Tōhoku
Conclusive- adnominal	taka-i ‘is tall’	Take	Take	tage
Stem	taka-ku ‘is tall, and...’	Tako	Take	tage-gu
Gerund	taka-ku-te ‘is tall, and...’	tako-te	take-te	tage-gu-te
Negative	taka-ku-nai ‘is not tall’	tako-ne	take-ne	tage-gu-ne
Past	taka-katta ‘was tall’	tako-katta	take-katta	tage-gatta
Provisional	taka-kereba ‘if it is tall...’	tako-kereba	take-kereba	tage-ba

Figure 1: Adjectival inflection in modern Japanese (after Ōnishi 1997:89-92)¹.

A dash (-) indicates a morpheme boundary; a colon (:) indicates a long vowel.

The conclusive-adnominal is so called because it both concludes an utterance as in *taka-i* ‘is tall,’ and modifies a nominal, as in *taka-i ki* ‘a tall tree.’

¹ This table is presented in somewhat simplified form. For example, the conclusive-adnominal *taka-i* is also attested in Ōita, though only *take* is given here. Ōnishi, who gives the forms in kana, shows short vowels in e.g. *take* and *tako*, etc., throughout for the dialects in question; this is followed here.

Conclusive-adnominal	taka-ki / taka-i
Stem	taka-ku; takɔ:
Gerund	taka-ku-te; takɔ:-te
Negative	taka-ku-naki /taka-ku-nai; takɔ:-naki/takɔ:-nai
Past	taka-katta
Provisional	taka-kereba

Figure 2: Adjectival inflection in Late Middle Japanese (adapted from Frellesvig 2010:340). Items separated by a backslash (/) are forms in free variation; those separated by a semicolon (;) are dialectal variants, with Eastern forms to the left and Western forms to the right.

To break down Figure 1 from the left over: the standard Japanese forms, as well as being the most conservative historically, are also transparent: to a root *taka* ‘tall’ one adds inflectional morphemes to arrive at various meanings: *taka-i* ‘X is tall’ *taka-i* X ‘a tall X,’ *taka-katta* ‘X was tall’ etc. The Ōita, Miyazaki, and Tōhoku forms all share a conclusive-adnominal *take*, historically derived from *taka-i* through monophthongization. The Ōita forms display root apophony: conclusive-adnominal *take* contrasts with stem *tako*, gerund *takote*, and negative *take-nai*. These latter forms derive from the Western LMJ forms in Figure 2; in Ōita this /o/ is further generalized through the past and provisional, in LMJ (and in standard Japanese) *taka-katta* and *taka-kereba*. The Miyazaki forms, historically derived from a Western LMJ base like their Ōita counterparts, show the generalization of the /e/ of the conclusive-adnominal throughout the paradigm. The Tōhoku forms, with characteristic intervocalic voicing of /k/ to /g/, show a similar generalization of conclusive-adnominal /e/. Henceforth, Miyazaki and Tōhoku will be treated together as ‘e-type’ dialects due to their generalization of /e/ vocalism; Ōita will be treated separately as an ‘o-type’ dialect due to its generalization of /o/ and the difference in that vowel’s distribution.

Various proposals have been made as to the changes that must have occurred diachronically to give rise to the distribution of forms seen in Figure 1. To the extent that in the e-type dialects the inflectional morphemes *-ku*, *-nai*, *-katta*, etc., occur after *take*, presumably an inflected form itself, it has been proposed that in these dialects there has been a process of ‘de-inflectionalization;’ this is e.g. the position of Itoi (1969) and Hino (1986). More recently, Hayano and Tanaka (2008), focusing on the Miyazaki data and Ōnishi (1997), considering both o-type and e-type dialects, have proposed that rather there has been a reanalysis of the monophthongized conclusive-adnominal *take* as a root with a zero ending – *take-∅* – which is then generalized through the paradigm. This account is preferable to the former in that the morphemes *-ku*, *-nai*, *-katta*, etc., remain bound in both ‘e-type’ and ‘o-type’ dialects; had de-inflectionalization occurred, one would expect them to have free, perhaps clitic, status². As such, I will follow the account of Hayano/Tanaka and Ōnishi in this paper.

Difficulties remain, however, in the distinction between the e-type and o-type dialects. In the former, an account of a new root *take-* becoming generalized can account for the forms given in Figure 1, while in the latter the case is somewhat more complicated. In Sections 3 and 4, I will attempt to address this remaining difficulty by comparing the modern Japanese forms and

² Such ‘de-inflectionalizations’ have in fact occurred in Japanese: see Narrog (2016).

the diachronic processes that yielded them with Watkins' Law-type changes in Indo-European.

3. Watkins' Law – Process and Motivations

3.1 The Process of Watkins' Law

'Watkins' Law,' named after Calvert Watkins who first proposed it in his 1962 *Indo-European Origins of the Celtic Verb*, refers to a complex of changes principally attested in languages of the Indo-European (henceforth IE) family. This series of changes involves the analogical leveling of verbal paradigms in which the third person singular becomes the 'pivot' of said leveling. The following example from Persian is typical:

	Proto-Iranian		Persian
1sg.	*as-mi 'I am'		hast-am 'I am'
2sg.	*as-i 'you are'		hast-i 'you are'
3sg.	*as-ti 's/he is'	(>*as-t)	hast-∅

Figure 3: Watkins' Law in Persian (Janse 2009).

As can be seen from Figure 3 above, the change proceeds by the following steps:

Step 1: Loss of /i/ in final unaccented position, leaving *as-t as 3sg.

Step 2: Reanalysis of *as-t, later *has-t*, as *hast-∅*.

Step 3: Extension of *hast-* through the paradigm.

That this order of changes is observable across a broad span of IE languages is what lends Watkins' Law its 'law'-like properties. It is important to note, however, that properly it refers only to a tendency; not only do the changes typical of Watkins' Law occur sporadically through time and space, but they also have sporadic attestation in the languages in which they occur at all, typically, though not always, limited to a single tense of a single verb (further examples will be introduced presently). As we will see below, however, even sporadic changes such as Watkins' Law are not without their motivations.

3.2. The Motivations of Watkins' Law

The motivations for the changes collectively referred to as Watkins' Law were first proposed by Benveniste (1966:225-236), who suggested that the 3rd person occupies a semantically 'crucial' position in the relations among persons of verbs. To summarize the main argument, while the first and second person are always present in a speech act, the third person is by definition absent, 'out there' somewhere; the third person is thus for Benveniste the 'zero person' or the 'non-person.' A corollary to this is that the third person serves to indicate a kind of 'pure action,' which the first and second persons qualify. Benveniste connects this with (1) the use in IE of the 3sg. for so-called 'impersonal' verbs (e.g. Latin *pluit* 'it's raining,' Greek *dei* 'one must,' etc.) and (2) the cross-linguistic tendency for the 3sg. to take zero marking (among others, Benveniste lists Hebrew *katav-∅* 'he wrote'; Sanskrit *kartā -∅* 'he will do; Turkish *geliyor-∅* 'he is coming,' etc.).

Benveniste's observations were taken up by Watkins (1962:90-96), who applied them to cases like that seen in Figure 3, among them the Sanskrit precativ, the Polish copula, the imperfect of the Middle Welsh copula, and the Persian preterite. Common to each case is the development of a zero ending in the 3sg., as in Figure 3, and the reanalysis of the string

preceding that zero ending as a root – which root becomes generalized through the paradigm. Watkins connects these changes with Benveniste’s proposals as to the ‘personless’ nature of the 3rd person; whereas, semantically, the 3sg. expresses a ‘pure’ predication which the two remaining persons qualify, the changes in Figure 3 and those like them give that relationship between the 3rd person and the 1st and 2nd persons morphological exponence, with the entire paradigm being rebuilt on the basis of the 3rd person.

4. Application to Japanese

4.1. The object of comparison: paradigmatic ‘weight’ in IE and Japanese

The items here subjected to comparison could at first glance hardly seem more dissimilar. Whereas IE languages are famously rich in person marking, Japanese not only displays no analogous person marking but as a pro-drop language does not require the overt marking of pronominal verbal subjects at all. What could be the point of comparing a sporadically-occurring historical change in IE verbs with a sporadically-occurring historical change in Japanese adjectives – which, of course, also lack person marking?

The point of the comparison lies not with the *items* placed into paradigmatic relationship in Japanese or IE, but precisely with those paradigmatic *relations* themselves. A closer consideration of the Watkins’ Law-type changes typified above by Persian, and the changes occurring in Japanese adjectives across several geographically non-contiguous dialects, will show them to be isomorphic – both in process and in motivation.

Revisiting Watkins’ Law, we have already seen that it is motivated by the ‘centrality’ of the third person singular in (1) the semantic relations among persons of the verb and (2) the corresponding morphological relations of person-marked verb forms occurring in a common paradigm. Semantically, the third person is ‘impersonal,’ expressing a kind of ‘pure action’ that is then qualified with respect to person by the first and second persons. Morphologically, this corresponds to (1) the cross-linguistic tendency for third person singular forms to be unmarked and (2) a similar tendency for the third person singular, having by historical accident lost its overt marker, to be reanalyzed as a root that is then extended throughout the paradigm.

It can be proposed that the conclusive-adnominal occupies a similar central position in the Japanese adjectival paradigm, and that it is that centrality that motivates the changes that lead to the distribution of forms summarized in Figure 1. Namely, the conclusive-adnominal expresses a simple, unqualified, ‘pure predication:’ e.g. Standard Japanese *taka-i* means simply ‘X is tall;’ the same is true of LMJ *taka-ki/taka-i*. Other forms in the paradigm all possess the function of qualifying this predication in some way or another: e.g. *taka-ku* ‘is tall, and...’ connects this predication to another predicate, *taka-katta* ‘was tall’ situates it in the past, and *taka-kereba* ‘if X is tall...’ subordinates it to another predicate B, of which predicate A is the antecedent condition. Morphologically, these desinences are all attached directly to the root *taka-*, but the relationships expressed by them logically presuppose the complete predication expressed by the conclusive-adnominal *taka-i*.

The situation in LMJ and Proto-Iranian can thus be seen to exhibit these similarities: each possesses a form which, semantically, is central to the paradigm, though this centrality goes unmarked in the morphology. In the case of Proto-Iranian we have seen how this latent semantic hierarchy becomes morphologically realized: a sound change removing the greater part of the substance of the 3sg. marker /ti/ leaves speakers with an anomalous and underivable form /ast/, later /hast/. Speakers then reanalyze this peculiar form as a root with the zero ending suited, per Benveniste, to the 3sg., and henceforth person endings are suffixed to this new root.

As with Persian, so in Japanese it is a diachronic change that both demonstrates the semantic centrality of the conclusive-adnominal to the paradigm and sees it attain a like morphological exponence. The Japanese change is, however, somewhat more complex. The diachronic stage for the Watkins' Law-type changes in Japanese is set by a change that begins to show traces even in Early Middle Japanese (henceforth EMJ): the 'conclusive-adnominal merger.'

In EMJ, adjectives (and indeed all inflecting words) possessed a distinction between the conclusive and the adnominal forms, of which the former served solely to indicate the end of an utterance and the latter served many functions. Among these were (1) modification of substantives, (2) the formation of headless nominalizations, and (3) use as a marked final predicate of numerous, largely modal, values. Gradually, use (3) of the adnominal came to predominate over, and eventually replace, the conclusive; this merger of the conclusive and adnominal was complete by LMJ (Frellesvig 2010:354-365; Kinsui 2011:77-83, *passim*). This change leads to the creation of an unmarked predicative form, the conclusive-adnominal *taka-i*, that contrasts with no other items than non-conclusive forms *taka-ku*, etc. This allows *taka-i* to assume the semantic centrality within the paradigm that neither *taka-si* nor *taka-ki* could of themselves possess in EMJ due to their having contrasted both with one another and with the entire array of non-conclusive forms at once. In other words, *taka-i* in LMJ has become the 'central' member of the LMJ adjectival paradigm, just as the 3sg. was for verbs in IE.

	EMJ		LMJ
Conclusive	<i>taka-si</i> 'is tall'	Conclusive-adnominal	<i>taka-ki/taka-i</i>
Adnominal	<i>taka-ki</i> 'is tall, you see'		
Stem	<i>taka-ku</i>	Stem	<i>taka-ku</i>
Gerund	<i>taka-ku-te</i>	Gerund	<i>taka-ku-te</i>
Negative	<i>taka-ku-naki</i>	Negative	<i>taka-ku-naki/taka-ku-nai</i>
Past	<i>taka-katta</i>	Past	<i>taka-katta</i>
Provisional	<i>taka-kereba</i>	Provisional	<i>taka-kereba</i>

Figure 4: paradigmatic relations in adjectives, from EMJ to LMJ. The LMJ dialectical differences noted in Figure 2 have here been omitted for the sake of simplicity.

The conclusive-adnominal merger, taking place between EMJ and LMJ, was thus the first step leading to the Watkins' Law-type changes in Japanese. The second step occurs between LMJ and Modern Japanese: this is the monophthongization of *taka-i*, the more frequent variant of the LMJ conclusive-adnominal. Here the resulting form, *take*, loses its morphological transparency. This leads to the third step, in which *take* becomes reanalyzed as root *take-* with zero ending for the conclusive-adnominal: *take-∅*. This then leads to the fourth step, displayed by the Miyazaki and Tōhoku forms in Figure 1: the extension of root *take-* throughout the paradigm. The development and its motivations are summarized below, along with the Persian case for comparison:

Watkins' Law-type changes in Japanese (e-type dialects):

Process:

Step 1: Conclusive-adnominal merger: *taka-si* \neq *taka-ki* > *taka-ki/taka-i*.

Step 2: Monophthongization of *taka-i* to *take*.

Step 3: Reanalysis of *take* as *take-∅*.

Step 4: Extension of *take-* throughout the paradigm.

Motivation:

The conclusive-adnominal becomes the sole final predicate form in LMJ, expressing a kind of 'pure predication.' This predication is qualified by the stem, gerund, negative, etc., and is 'presupposed' by them. When steps 2 and 3 are completed, these semantic relationships are given morphological expression, leading to Step 4.

Watkins' Law-type changes in Persian:

Process:

Step 1: Loss of /i/ in final unaccented position, leaving **as-t* as 3sg.

Step 2: Renalysis of **as-t*, later *has-t*, as *hast-∅*.

Step 3: Extension of *hast-* through the paradigm.

Motivation:

The 3sg., as the 'non-person,' always absent from a speech act, expresses a 'pure action' that both suits it to a zero ending and is 'presupposed' by the other two persons. With Step 2, as in Japanese, these semantic relationships are given morphological expression.

In summation, the element shared by both the 3sg. in IE and the conclusive-adnominal in Japanese adjectives is *paradigmatic weight*, a 'crucial' or fulcral position in their respective paradigms. Despite their superficial differences, then, the Watkins' Law-type changes in IE and their Japanese counterparts both demonstrate how the center of paradigmatic weight can become the center of analogical leveling in paradigms. The agreement between them thus illustrates a cross-linguistic tendency of paradigmatic relations.

4.2. A complication: e-type vs. o-type dialects; the two faces of Watkins' Law

By now it is likely evident that the foregoing account of the Watkins' Law-type changes in Japanese cannot satisfactorily account for all of the data given in Figure 1 above. Particularly concerning is the contrast between the e- type and o-type dialects: while the latter show a generalization of the /e/ of the conclusive-adnominal through the entire paradigm, consistent with the progression monophthongization > root+ zero, no such analysis is possible with Ōita, our sole o-type dialect. To review the Ōita situation, I here reproduce Figure 1:

	Standard (Tokyo)	Ōita	Miyazaki	Tōhoku
Conclusive- adnominal	taka-i 'is tall'	Take	take	Tage
Stem	taka-ku 'is tall, and...'	Tako	take	tage-gu

Gerund	taka-ku-te 'is tall, and...'	tako-te	take-te	tage-gu-te
Negative	taka-ku-nai 'is not tall'	tako-ne	take-ne	tage-gu-ne
Past	taka-katta 'was tall'	tako-katta	take-katta	tage-gatta
Provisional	taka-kereba 'if it is tall...'	tako-kereba	take-kereba	tage-ba

As we can see, the o-type situation is distinct. Here, reflexes of the western LMJ forms of the stem, gerund, and negative have been generalized to a degree, occurring in the past (*tako-katta* for *taka-katta*) and provisional (*tako-kereba* for *taka-kereba*); the conclusive-adnominal is unchanged. Rather than a new root becoming generalized throughout the paradigm, then, this case is one of a development of distinct conclusive and non-conclusive forms: the conclusive-adnominal remains *take*, while everything else takes a non-conclusive base *tako*. This reflects the new central position attained by the conclusive-adnominal, though it does so in a different way than in e-type dialects. Where in e-type dialects the conclusive-adnominal is the source of an innovation that becomes generalized, in o-type dialects it is rather a locus of resistance to an innovation that arises elsewhere in the paradigm, here the spread of non-conclusive /o/ vocalism.

Put otherwise, the centrality of the conclusive-adnominal has both a 'positive,' innovating force and a 'negative' one, resistant to innovations arising elsewhere. A similar proposal has been made about the third person in IE by Joseph (1980) who considers the Modern Greek preterite, historically a reflex of the classical imperfect (past imperfective). Beginning in the early centuries CE, /a/ vocalism began to enter the imperfect paradigm under the influence of the aorist (past perfective). This is reflected in the Modern Greek preterite. However, the 3rd and 2nd person singular have been immune to this change, which Joseph ascribes to the same 'central' character of the third person that leads to its becoming the innovating center in canonical Watkins' Law-type changes.

Ancient Greek				Modern Greek	
Person	Sing.	Plur.		Sing.	Plur.
1	e-phug-on	e-phug-omen	>	e-phug-a	phug-ame
2	e-phug-es	e-phug-ete	>	e-phug-es	phug-ate
3	e-phug-e	e-phug-on	>	e-phug-e	e-phug-an

Figure 5: Watkins' Law as a 'negative' force in Greek (after Joseph 1982)³

As with the 3sg. in Greek, so the conclusive-adnominal can also resist analogical pressure from elsewhere in the paradigm: in this case, the spread of /o/ vocalism from the non-conclusive forms. The center of paradigmatic weight, then, can be seen to have exert both 'positive' and 'negative' forces, and the IE changes exemplified in Figures 3 and 5, as well as those in e- and o-type dialects in Japanese, represent two sides of the proverbial coin.

³ The verb here is 'to flee,' root *phug-*: 1sg. *e-phug-on* 'I fled,' 2sg. *e-phug-es* 'you fled' etc. For simplicity, phonological changes between Ancient and Modern Greek are not reflected here.

5. Summary; Conclusions and Implications

To summarize, I have proposed that the diachronic processes that result in the adjectival paradigms of e- and o-type dialects in Japanese are identical in kind to those that in Indo-European are known as instances of Watkins' Law. Each involves a center of paradigmatic 'weight' which becomes, after a sound change disrupting its morphological transparency, the center of an analogical refashioning of that paradigm. In this refashioning, the altered form becomes reanalyzed as a new root, which is then generalized throughout the paradigm. Alternately, the 'crucial' member of the paradigm resists innovations arising from elsewhere in the paradigm. I have suggested that this dual nature of the 'crucial' member of the paradigm, in Japanese the conclusive-adnominal, can help us to understand the different lines of development in e-type and o-type dialects.

Like Watkins' Law-type changes in Indo-European, leveling of Japanese adjective paradigms around the conclusive-adnominal is sporadic, and furthermore attested in geographically non-contiguous regions. This raises the possibility that, while geographically peripheral dialects frequently preserve older material than those around the innovating center in the old capital region of Kyoto and environs (see esp. Yanagida 1980), this does not always need to be the case. The changes treated in this paper appear rather to be independently innovated in each specific locality in which they occur. They may thus be of more general interest in the study of Japanese dialects and their histories.

Further afield, the paradigmatic 'weight' established for the third person in IE by Benveniste and Watkins, and proposed here for the Japanese conclusive-adnominal, can further be observed in cases of analogical leveling in e.g. Greek (Horrocks 2006:286) and Middle Indo-Aryan (Geiger 1916:90-91), in which the accusative singular became the basis for leveling in nominal paradigms. The principle at work in Watkins' Law-type changes in IE verbs and Japanese adjectives can thus be seen to hold – if not as an ineluctable 'law' as such, at least as a common tendency across languages – for paradigmatic relations and paradigmatic change more generally.

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